UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
901 NORTH FIFTH STREET
KANSAS CITY, KANSAS 66101

BEFORE THE ADMINISTRATOR

IN THE MATTER OF MORAN BEEF, INC., Respondent	Docket No. CWA-07-2010-0080 RESPONDENT'S INITIAL PREHEARING EXCHANGE

COMES NOW the Respondent, Moran Beef, Inc., by and through its attorney, Eldon L. McAfee, and for its Initial Prehearing Exchange:

1. a. Witnesses Respondent intends to call:

(1) Gerald T. Hentges, P.G., Senior Hydrologist, Terracon Companies, Inc. See attached curriculum vitae. Mr. Hentges will testify in reply to the testimony of Complainant's witnesses, including regarding whether any discharge from the Moran Beef, Inc. feedlot during the applicable time period to a water of the United States in violation of the Clean Water Act has occurred, whether Moran Beef, Inc. was required to obtain an NPDES permit, the applicability of EPA's evidence of a discharge beyond the specific day or days the evidence was obtained, and any allegations by EPA that Moran Beef, Inc.'s feedlot has had an adverse effect on water quality and aquatic life. See Mr. Hentges' report attached to this Initial Prehearing Exchange.

(2) Joseph M. Turner, Turner's Ag Consulting. See attached resume. Mr. Turner will testify in reply to the testimony of Complainant's witnesses, including

regarding whether any discharge from the Moran Beef, Inc. feedlot during the applicable time period to a water of the United States in violation of the Clean Water Act has occurred and whether Moran Beef, Inc. was required to obtain an NPDES permit,

(3) Frank Moran. Mr. Moran is expected to testify regarding Moran Beef, Inc.'s answers and Defenses to Proposed Civil Penalty in Moran Beef, Inc.'s Answer and Request for Hearing and in reply to the testimony of Complainant's witnesses, including regarding whether any discharge from the Moran Beef, Inc. feedlot during the applicable time period to a water of the United States in violation of the Clean Water Act has occurred, whether Moran Beef, Inc. was required to obtain an NPDES permit, the applicability of EPA's evidence of a discharge beyond the specific day or days the evidence was obtained, and any allegations by EPA that Moran Beef, Inc.'s feedlot has had an adverse effect on water quality and aquatic life. Further, Mr. Moran is expected to testify about the lack of economic benefit he received by not building runoff control structures as alleged by EPA.

(4) Gene Tinker, Iowa DNR. Mr. Tinker is expected to testify as to the Iowa DNR regulations and implementation of the Clean Water Act for feedlots such as Moran Beef, Inc.'s.

(5) Alison Manz, Iowa DNR. Ms. Manz is expected to testify as to Moran Beef, Inc.'s compliance with the Clean Water Act as implemented by the Iowa DNR.

(6) Trevor Urban, U.S. EPA. Mr. Urban may testify regarding his activities, actions and conclusions regarding EPA inspections of the Moran Beef, Inc. feedlot.

(7) Joe Heafner, U.S. EPA. Mr. Heafner may testify regarding his activities, actions and conclusions regarding EPA inspections of the Moran Beef, Inc. feedlot.

(8) Stephen Pollard, U.S. EPA. Mr. Pollard may testify regarding his activities, actions and conclusions regarding EPA inspections of the Moran Beef, Inc. feedlot.

(9) Midwest Laboratories, Omaha, Nebraska staff. If the parties are unable to stipulate to the admissibility of sampling results produced by Respondent in this case, Respondent will call the Midwest Laboratories staff necessary to establish a proper chain of custody of the samples and to testify regarding the analyses performed on the samples.

(10) Stewart Melvin, P.E., Curry, Wille and Associates and retired Iowa State University Professor, Ag and Biosystems Engineering. Mr. Melvin is the Respondent's engineer who prepared design plans for runoff controls for the Iowa DNR construction permit application and the NPDES permit. Mr. Melvin may testify as to whether any discharge from the Moran Beef, Inc. feedlot during the applicable time period to a water of the United States in violation of the Clean Water Act has occurred, whether Moran Beef, Inc. was required to obtain an NPDES permit, and Respondent's efforts obtain an Iowa DNR construction permit and NPDES permit.

(11) Evan Vermeer, formerly with the Iowa Cattlemen's Association. Mr. Vermeer is expected to testify as to the implementation of the Clean Water Act for feedlots such as Moran Beef, Inc.'s.

Respondent reserves the right to call any fact witnesses named by Complainant.

b. Documents and exhibits Respondent intends to introduce into evidence:

Respondent's Exhibit 1:	Photographs (R-1-A through R-1-O)
Respondent's Exhibit 2:	Gerald Hentges Report
Respondent's Exhibit 3:	Gerald Hentges CV
Respondent's Exhibit 4:	Joseph Turner resume
Respondent's Exhibit 5:	Section 308 Requests and Reply
Respondent's Exhibit 6:	Turner email & EPA reply
Respondent's Exhibit 7:	Turner email & EPA reply
Respondent's Exhibit 8:	Turner sample results
Respondent's Exhibit 9:	Turner sample results

Additional documents, including documents in reply or rebuttal, will be provided as a supplement to this Initial Prehearing Exchange as provided by the Prehearing Order and 40 C.F.R. §22.19.

c. Respondent submits that the hearing in this case should be held in Des Moines, Iowa pursuant to §22.21(d) and §22.19(d). Respondent estimates that the time needed for its direct case will be 2 days.

2. All Factual Information Relevant to the Assessment of a Civil Penalty. See Respondent's Answer and Request for Hearing, Defenses to Proposed Civil Penalty. In addition, Respondent submits and will testify that it did not receive economic benefit in this case due to the nature of its feedlot and other costs it incurred. Respondent also submits that it has no prior history of environmental violations that warrant consideration

in the assessment of a civil penalty. Culpability factors are addressed in Respondent's Answer and Request for Hearing, Defenses to Proposed Civil Penalty.

3. This paragraph is not applicable to Respondent.

4. At this time, Respondent does not intend to take the position that it is unable to pay the proposed penalty or that the proposed penalty will have an adverse impact on the Respondent's ability to continue in business.

5. This paragraph is not applicable to Respondent.

This Initial Prehearing Exchange will be supplemented, including submission of names of additional witnesses and/or submission of additional exhibits prior to hearing, upon timely notice to the Presiding Officer and to Complainant.

Dated this 29th day of October, 2010.

BEVING, SWANSON & FORREST, P.C.

Eldon L. McAfee AT0004987
321 E. Walnut Street, Suite 200
Des Moines, IA 50309
Telephone: (515) 237-1188
Facsimile: (515) 288-9409
emcafee@bevinglaw.com

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing instrument was served upon each of the attorneys of record of all parties to the above-entitled cause herein at their respective addresses disclosed on the pleadings of record on the 29th day of October, 2010.

By: ☒ U.S. Mail ☐ FAX
☐ Hand Delivered ☐ Overnight Courier
☐ Federal Express ☐ Other:

Signature:

Original and one copy by United States Postal Service to:

Regional Hearing Clerk
U.S. EPA
Region VII
901 North 5th Street
Kansas City, KS 66101

Copy by United States Postal Service to:

EPA Office of Administrative Law Judges
1200 Pennsylvania Ave. NW
Mail Code 1900L
Washington, DC 20460

Copy by United Parcel Service to:

William A. Spratlin, Director
Chris Muehlberger, Asst. Regional Counsel
U.S. EPA
Region VII
901 North 5th Street
Kansas City, KS 66101

EXHIBIT
R-1-A

EXHIBIT
R-1-B

EXHIBIT
R-1-C

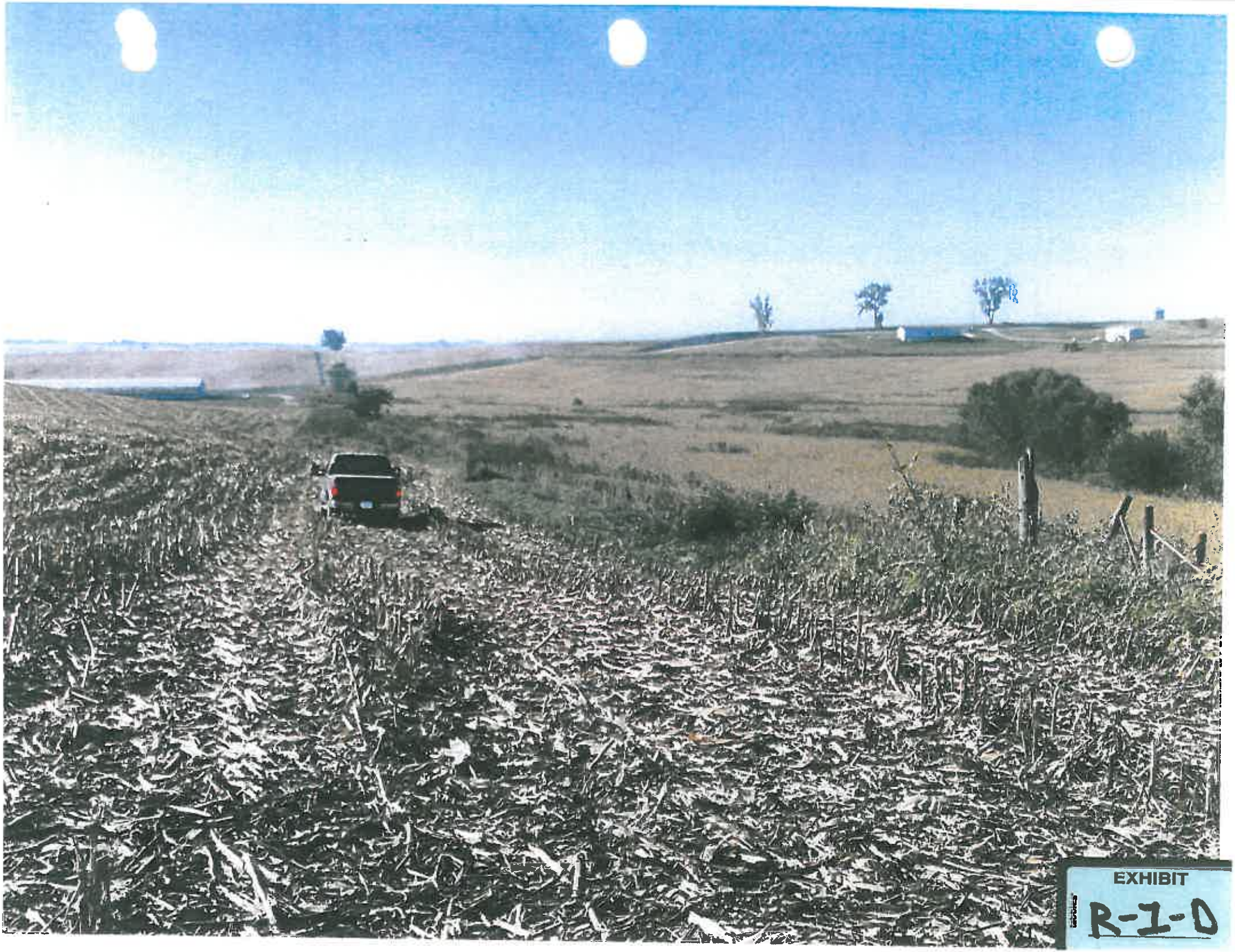


EXHIBIT
R-1-D


EXHIBIT
R-1-E


EXHIBIT
tabbies
R-1-F

EXHIBIT
tabbies
R-1-G

EXHIBIT R-1-H

EXHIBIT
tabbies
R-1-I

EXHIBIT
R-1-J

EXHIBIT

tabbies

R-7-k

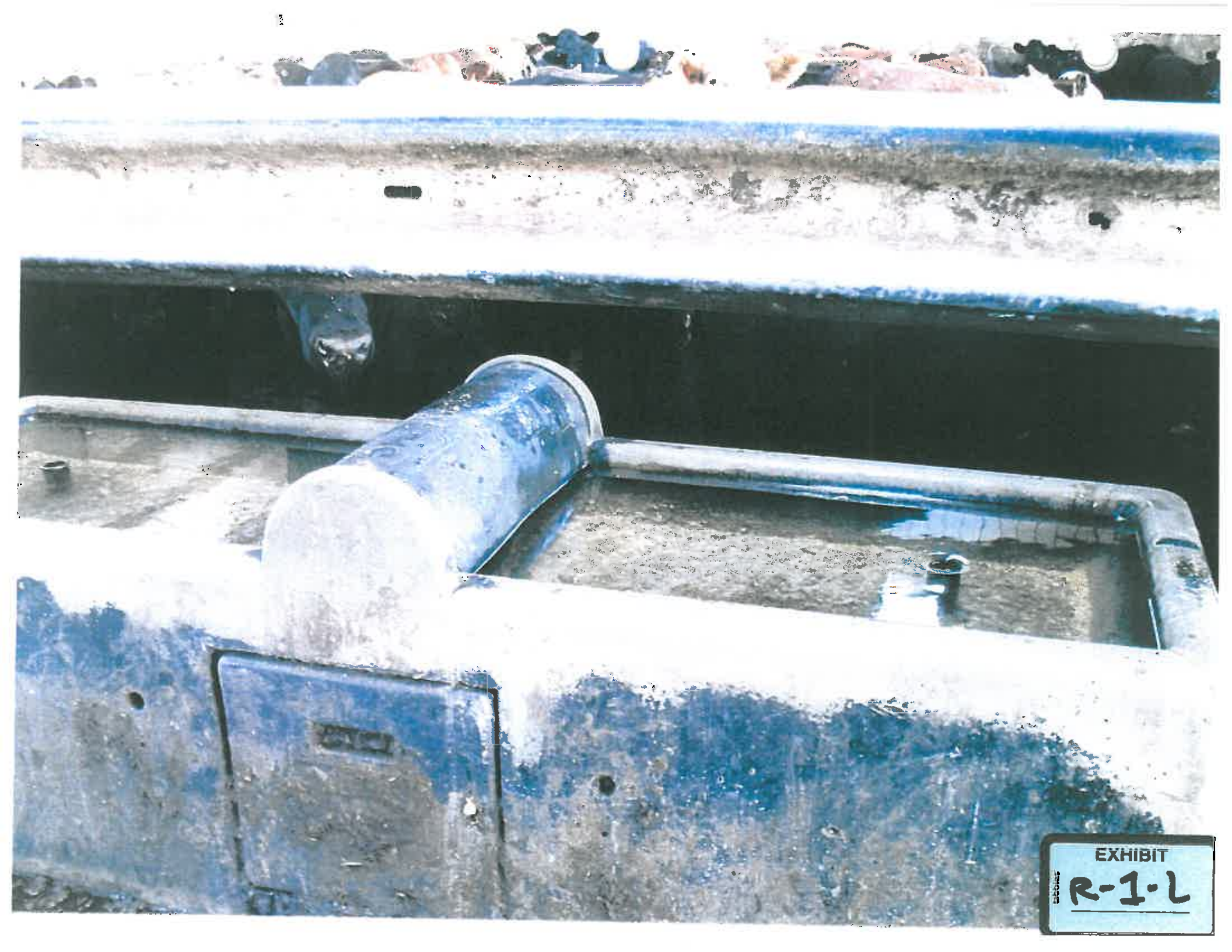


EXHIBIT
R-1-L

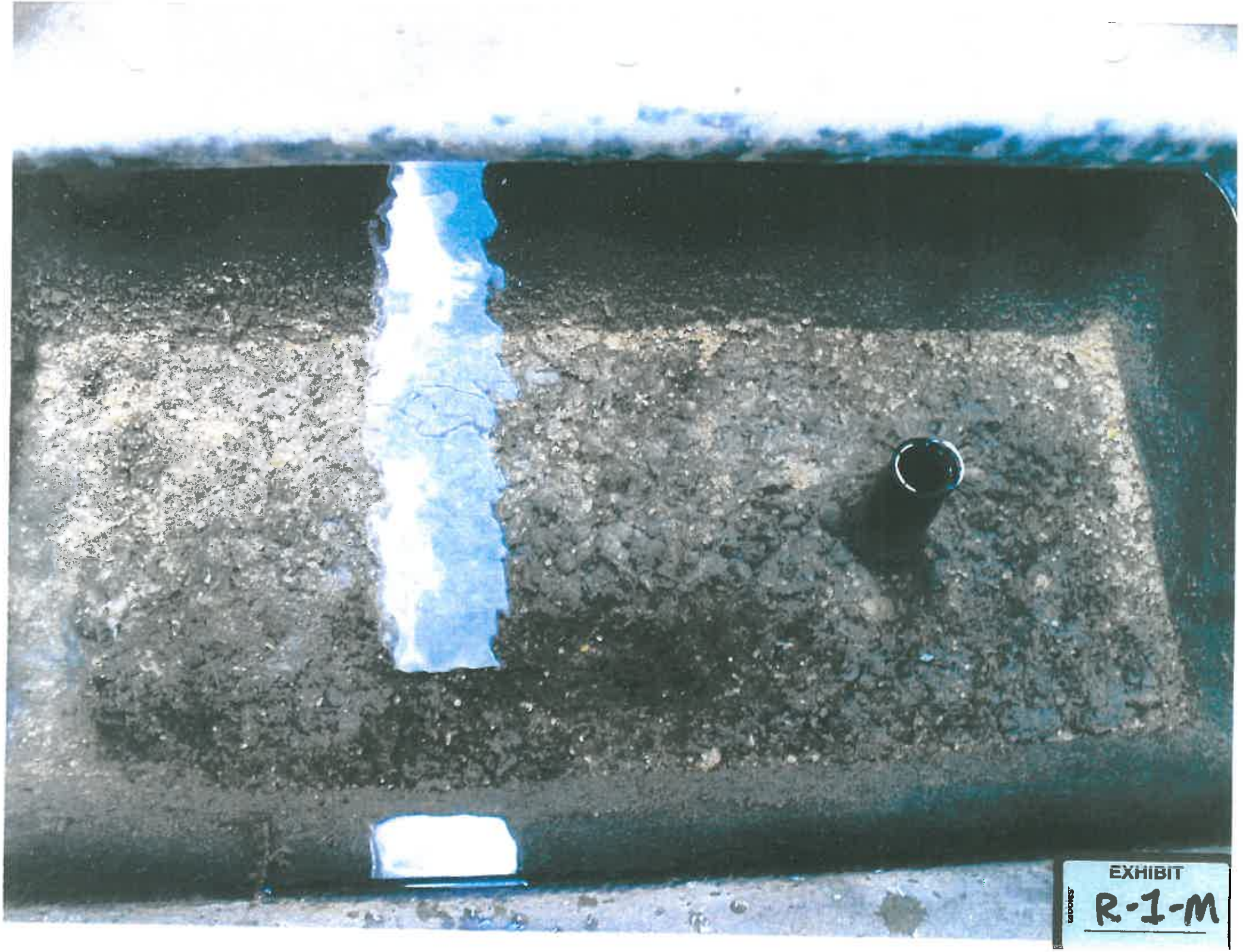


EXHIBIT
R-1-M


EXHIBIT
R-1-N

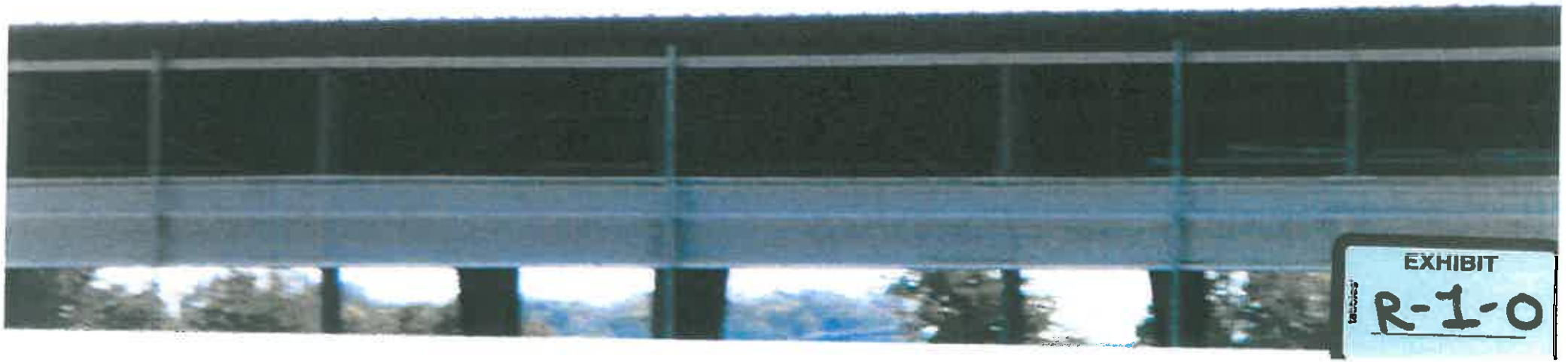


EXHIBIT
R-1-0

USEPA, Region 7 vs. Moran Beef Inc.
Pottawattamie County, Iowa

Introduction

I have reviewed the complainants' Finding of violation dated January 13, 2010. The complaint alleges that Moran Beef Inc. discharged pollutants to a water of the United States without an NPDES Permit. The complaint states that EPA inspectors observed inadequate runoff controls and evidence that feedlot runoff was discharging from the Moran facility to an unnamed tributary of Mosquito Creek. To determine the number of illegal discharge events the EPA obtained rainfall records in the area and assumed each time it rained a certain amount that the surface water runoff, sediment erosion and nutrient movement from the Moran facility flowed to an unnamed tributary of Mosquito Creek.

The evidence obtained during the inspections is based on photographs of the facility and surface water sample results. The areas described as discharge pathways of runoff from the feed lot settling basins appear to also collect drainage from larger areas of row cropped farm fields. Many inconsistencies appear in the photograph's that claim to show manure runoff from the feed lot.

The sampling results and the inspection observations obtained by the USEPA are generally inconclusive regarding the discharge of manure from the facility into waters of the US. The contention that a discharge occurred at the facility when rainfall exceeded a given amount is unsubstantiated.

USEPA Inspection Report June 4, 2009

The inspection report indicates that visible spilled bedding and manure were present in uncontrolled areas as shown in Photograph Nos. 8, 9 and 10. The storage of clean cornstalks for use as bedding material are apparent in the photographs mentioned, however spilled bedding and manure are not apparent in photographs 8, 9, and 10. If indeed spilled, used bedding and manure were observed specific pictures should have been taken that clearly demonstrated the condition.

The report states no process waste water discharge was observed at the time of the inspection. The report then indicates process waste water was observed at a tile drain discharge point and that a process waste water flow pathway and dead vegetation for approximately 30 to 45 feet was also observed and documented in photographs 4, 11, 12, 13, 14 and 15.

The process waste water and process waste water flow pathway and dead vegetation are not apparent in Photographs Nos. 4, 11, 12, and 13. The material on the ground in

Photographs Nos. 11, 12 13 and 14 appears to be soil from the row crop area. Some dead vegetation is present in Photograph No. 14 but it appears to be weed stubble from the previous growing season.

The process waste water and process waste water flow pathway are not apparent in Photograph No. 15. Some dead vegetation is present in this photograph but it appears to be weed stubble from the previous growing season. The material on the ground in Photograph No. 15 appears to be sediment within the tributary to Mosquito Creek.

USEPA Inspection Report October 30, 2009

The inspection report indicates that feedlot pollutants including ammonia and phosphorous were discharging into the tributary and surface water samples were collected to confirm the discharge.

USEPA Inspection personnel collected 4 grab samples of surface water at the site. The samples were designated 101 through 104 and were collected at the following locations:

Sample 101 - Tributary upstream of tile line discharge
Sample 102 - Tile line discharge from water in the drainage way
Sample 103 - Tributary downstream of tile line discharge
Sample 104 - Tributary at the tile line discharge

The October 30, 2009 USEPA Inspection Report states that elevated concentrations in sample No. 102 of the following parameters indicate that a discharge from the site occurred:

- Residue, Non-filterable (Suspended solids)
- Phosphorus
- Total Kjeldahl Nitrogen
- Ammonia

The laboratory results indicated that concentrations of the parameters listed above were elevated in sample No. 102. The physical appearance of the samples collected are shown in the photograph No. 7 in attachment 3 page 9 of 9 in the October 30, 2009 USEPA Inspection Report. The Sample Collection Field Sheets contained in Attachment 6 of in the October 30, 2009 USEPA Inspection Report indicate the relative clarity of the water collected. Based on the Sample Collection Field Sheets the water samples had the following clarity:

Sample No. 101 - Clear
Sample No. 102 - Dark Brown/Yellow
Sample No. 103 - Opaque, Cloudy
Sample No. 104 - Light Yellow/Brown

There are several discrepancies present in the reports and apparent in the photographs obtained during the inspections. It appears that the sample collected from the drainage way (sample No. 102) contained copious amounts of sediment (photograph No. 7 in attachment 3 page 9 of 9). Photographs Nos. 4, 5 and 6 in Attachment 3 of the October 30, 2009 USEPA Inspection Report show sediment and decaying vegetation that caused sample No 102 to have a Dark Brown/Yellow color.

The elevated parameters for sample No. 102 are likely to be from, decaying organic matter in weeds, crop stover (stalks and leaves), sediment and nutrients applied to the soil. The photographs, Sample Collection Field Sheets and chemical analysis indicate that the samples collected from the tributary had less deleterious matter entrained in the sample containers and therefore, lower the parameter concentrations.

The statement that process waste water was flowing from the solids settling structure is not substantiated with a photograph, when it appears it would have been easily documented in that manner. The October 30, 2009 USEPA Inspection Report indicates that Photographs Nos. 5 and 6 in Attachment 3 show the water discharging from the solids settling structure. However, this water is likely sheet flow from the row crop area discharging to the drainage way.

Non-filterable Residue (NFR) is a measure of the particulate matter that is suspended within a water column. Non-filterable Residue are solids in water that can be trapped by a filter. Non-filterable Residue can include a wide variety of material, such as sediment and decaying plant matter.

The compounds that are derived from the Phosphate mineral (P) are called Phosphorus. They have two forms Inorganic and Organic. Inorganic phosphorus is generally in the form of, Phosphate P the mineral, Ortho Phosphate PO_4 which is oxygenated and Poly Phosphates such as PO_2O_2 which is synthetic and made commercially for water treatment and cleaning in soaps and deodorizers

Organic phosphorus is generally in the form of, organo-proteins and organic phosphorus molecules from decaying organic matter.

In water, total phosphorus (P) is the sum of both the inorganic and organic phosphate compounds. To measure the organic level in waters you need to analyze total

phosphorus and subtract inorganic phosphorus to determine the amount present from organic sources.

Since inorganic phosphorus occurs naturally in soils, it is likely a portion of the amount present in sample No. 102 was impacted by the turbidity and the soil solids present in the sample collected from the shallow drainage way. Since organic phosphorus occurs naturally in decaying crop stover and weeds, it is likely that a portion of the amount present in sample No. 102 was impacted by the storm water runoff from the fields and vegetation in the drainage way.

Total Kjeldahl Nitrogen (TKN) is the sum of organic nitrogen, ammonia (NH_3), and ammonium (NH_4^+) in the chemical analysis of water. To calculate Total Nitrogen (TN), the concentrations of nitrate-N and nitrite-N are determined and added to TKN. Since organic nitrogen occurs in soil and plants naturally, it is likely a portion of the amount present in sample No. 102 was impacted by the soil solids present in the sample and by decaying crop stover and weeds from the fields and vegetation in the drainage way.

Ammonia is a naturally-occurring compound that is an intermediate in the global nitrogen cycle. It is essential for many biological processes and is a central compound in all living organisms. Ammonia is the most abundant alkaline gas in the environment. Ammonia may be present in the environment from decaying organic matter and fertilizers applied to soils.

Nitrate (NO_3^-) and nitrite (NO_2^-) are naturally occurring inorganic ions that are part of the nitrogen cycle. Microbial action in soil or water decomposes material containing organic nitrogen into ammonia, which is then oxidized to nitrite and nitrate. Contamination with nitrogen-containing fertilizers (e.g. potassium nitrate and ammonium nitrate), or animal or human organic wastes, can raise the concentration of nitrate in water. The low concentrations of Nitrate (NO_3^-) and nitrite (NO_2^-) in sample No. 102 indicate the source of the parameters was likely not discharge from the solids settling basin.

USEPA Inspection Report September 23, 2010

The inspection report indicated that approximately 1.14 inches of rain had occurred from September 21-23, 2010 with over half (0.64-inches) occurring on September 23, 2010. The inspection report indicates that leachate from a bedding storage area was flowing toward the tile inlet west of the confinement barn. The inspection report also indicates that the drainage tile inlet directly west of the confinement building was receiving runoff from areas around the barn including the bedding storage area. The inspection report indicates that about 12-inches of manure solids and feedstuffs were observed in the

tributary near the tile outlet. Surface water samples were collected to confirm the discharge.

USEPA Inspection personnel collected 4 grab samples of surface water at the site. The samples were designated 1 through 4 and were collected at the following locations:

Sample No. 1 - Leachate from a bedding storage area
Sample No. 2 - Tributary in the vicinity of the tile outlet
Sample No. 3 - Tributary downstream of tile outlet
Sample No. 4 - Tributary upstream of the tile out

The complete results of the sample analyses conducted were not provided with the September 23, 2010 USEPA Inspection Report. The laboratory results that were provided indicated that Biological Oxygen Demand (BOD) was elevated in sample Nos. 1 and 2. The laboratory results that were provided also indicated that E. coli was elevated in sample Nos. 1, 2 and 3.

The presence of E. coli bacteria have been used to indicate the presence of recent fecal contamination. However, E. coli are present in the intestinal tract of warm-blooded birds and mammals. The bacteria E. coli bacteria have also been found in fish and turtles. Sand and soil also harbor E. coli bacteria and some strains of E. coli have become naturalized in the soil.

Biological Oxygen Demand (BOD) is a measure of the oxygen used by microorganisms to decompose organic matter such as dead plants, leaves, grass clippings, manure, or food waste present in water.

The presence of E. coli bacteria and depleted oxygen in water draining from decomposing organic matter such as corn stalks stockpiled for use as future bedding is not unusual. The reported presence of manure and feed in the tributary prompted a visit to the site.

October 1, 2010 Site Visit

I visited the site on October 1, 2010 with Moran Beef Inc. representatives and counsel. Photographs taken during the visit are attached and listed are R-1-A through R-1-E. The sites, pens, feed roadway, confinement, settling basins, terraces, drainage ways and the

tributary were observed to be in good order. After observing the facility and returning, the USEPA Inspection Report of September 23, 2010 was made available to Moran Beef Inc. representatives and their counsel.

October 2, 2010 Site Visit

I re-visited the site on October 2, 2010 with Moran Beef Inc. representatives to evaluate the reported manure and feed in the tributary. Photographs taken during the visit are attached and listed are R-1-F through R-1-O. Mr. Frank Moran directed me to the location where the tile outlet discharges to the tributary. Photograph R-1-F shows the general vicinity of the tile outlet. Photograph R-1-F shows a slight convex depression in the eastern tributary bank that is in the vicinity of the tile outlet. Photograph R-1-G shows the sediment and corn present in the convex depression in the general vicinity of the tile outlet. The sediment material was dark, with a flake like consistency and approximately 3-inches thick. Cracked corn was present with the sediment. A sample of the sediment material (sample No. 1) was collected. A sample of the tributary bed sediment upstream from the tile outlet (sample No. 2) was also collected. Photographs R-1-H through R-1-K show the sediment samples.

Discussions with Mr. Moran regarding how cracked corn could enter the tile line inlet indicated that the over flow pipes in the watering basins inside the confinement building were connected to the tile drain system. Photographs R-1-L through R-1-N shows the watering basins and the overflow pipes. Mr. Moran indicated that the watering basins are fed by a slow trickle of water to provide fresh water and prevent freezing. The basins fill up to the top of the overflow pipe and the water flows into the pipe and drains to the tile outlet. Mr. Moran indicated when the watering basins are cleaned the overflow pipe is removed and the material in the bottom of the basins is rinsed down the drains to the tile outlet. An inspection of the watering basins indicates that cracked corn and cattle saliva build up on the base of the water basins over time. The feed and saliva buildup and the bacterial growth on the material are shown in Photograph Nos. R-1-M and R-1-N.

A sample of the material on the base of the watering basins was collected. A sample of the stockpile manure inside the confinement building was also collected. The material characterized as manure in the tributary appears to actually be bacterial growth on small amounts of cracked corn feed and cattle saliva.

Discharge to Waters of U.S.

The Complaint's allegation that the facility discharged on at least 18 occasions between April 27, 2009 and September 23, 2010 is only quantified by conjecture and not based on documentation or sound science. The Complaint alleges that the facility discharged on October 30, 2009, September 23, 2010 and each time during this period when the rainfall amount in Underwood, Iowa exceeded 1-inch. During the October 30, 2009 USEPA Inspection the 24-hour rainfall amount was 0.33 inches but discharge from the settling basins was not documented. During the September 23, 2010 USEPA Inspection the 24-hour rainfall amount was 0.64 inches but discharge from the settling basins was not documented.

The argument that discharge from the settling basins occurred at the site whenever the rainfall exceeded a given amount is flawed based on known hydrologic principals. The amount of runoff generated by a storm event is based on several factors in addition to the precipitation amount. These variables include air temperature, humidity, antecedent soil moisture conditions, rainfall intensity and rainfall duration. The most important factor is the volume of storage present in the solids settling basins before the precipitation event occurred. The settling structures are designed to hold the 25-year, 24-hour storm event which is approximately 5.3-inches in 24 hours.

Statement of Opinion

The standard of care in the environmental profession for documenting the source of impact to the environment is to sample the source, if possible. This provides a baseline for evaluating the subsequent impact to other media in the environment. No information was presented in the complaint that indicates the source (manure solids settling basins) was sampled. During several of the USEPA Inspections statements indicate that a discharge was occurring from the solids settling basins at the site. Yet photographic documentation was not obtained.

The U.S. Environmental Protection Agency (EPA) identifies sediment as the single most widespread pollutant affecting the beneficial uses of the Nation's rivers and streams (EPA, 1998). Heavy rains can pick up sand, silt, clay, and organic particles (such as crop residue, leaves and soil) from the land and carry it to a surface water drainage way.

No information was presented in the complaint that indicates the elevated concentrations were not present due to various other natural materials observed at the site.

Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of environmental conditions may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). No warranties, express or implied, are intended or made.

Sincerely,

Gerald T. Hentges, P.G.,
Senior Hydrogeologist
Terracon

GERALD T. HENTGES.
SENIOR PROJECT MANAGER

PROFESSIONAL EXPERIENCE
Mr. Hentges is a senior project manager in Terracon's Des Moines, Iowa, office. His duties include managing projects for water supply, wetland mitigation, sanitary landfills, agricultural facilities and hazardous waste facilities.

PROJECT EXPERIENCE
Mr. Hentges has been involved with all aspects of solid waste operations from permit application through hydrogeological assessment to site closure. He is responsible for planning and conducting hydrogeological assessments at over 20 private and publicly owned solid waste facilities throughout Iowa, and at 16 sites in Nebraska, Minnesota and Wisconsin. He was involved with engineering design, expansion design, permit renewals, groundwater monitoring plans and has prepared closure and post-closure plans at many of the sites. Some of these sites include; Fayette County, Buchanan County, Hamilton County, North Dallas, Wright County, Montgomery County, Mills County, Polk County, Mahaska County, Story County, Madison County, ADM (Clinton, Iowa) and Hamilton County sanitary landfills. Mr. Hentges has developed leachate control plans for several Iowa sanitary landfills. These plans included chemical characterization, extraction system design, treatment and disposal. He has conducted long-term, site-specific field assessments to evaluate the extractable volume of leachate. Mr. Hentges is currently on the technical advisory and legislative rules committee for the Iowa Society of Solid Waste Operations for the Solid Waste Association of North America (SWANA).

Mr. Hentges was the senior hydrologist on the Hughes/Phillips and Rempe Reclamation abandoned strip mine projects, where groundwater flow from underground mines contributed significant amounts of acid mine drainage to the receiving surface water streams. His work included geophysical studies to determine the sources of groundwater flows from underground mine works. He developed a reclamation plan to create a 50-acre wetland to reduce impacts on local streams from spoils and underground mines in the area. Mr. Hentges has conducted several flood plain delineation, erosion and sediment transport control studies by modeling runoff and peak flows for major streams and drainage ways.

Mr. Hentges is responsible for managing wetland delineation and mitigation projects. Mr. Hentges acts as primary coordinator for Terracon's statewide 404 Permitting for Wetland Delineation and Mitigation contract with the Iowa Department of Transportation. His wetland permitting experience has included large and small commercial developments and retail buildings, manufacturing and distribution facilities, roadway and bridge construction, residential developments, utility structures, solid wastes disposal facilities, and communication towers.

His expertise in geomorphology, geology and groundwater hydraulics and surface and groundwater modeling have led to effective programs for wetland management and design at many sites. Mr. Hentges' experience includes delineation and mitigation of wetland areas impacted by highway alignments, developments and recreational facilities. He has written several wetland enhancement, creation and mitigation plans.

PROJECT EXPERIENCE (CONTINUED)

Mr. Hentges was the senior hydrogeologist responsible for evaluation and assessment for well field expansion and water quality at Boone, Sergeant Bluff, Greenfield, Logan, Carlisle, Carroll and the Wappello Rural Water Districts South Skunk River well field in Iowa; and the Cities of Eden Prairie, Bloomington and Mankato, Minnesota. He has used a variety of geophysical methods to assess near surface sand and gravel deposits for water well field development and expansion.

He was the senior hydrogeologist for the two pesticide spill studies and there impact on public water supplies in Hospers, Iowa and Oxford Junction, Iowa. He conducted a study of the effects of logging and pulp mill effluent on the city well field in Marshfield, Wisconsin. Mr. Hentges has managed well field investigation projects including aquifer pumping test analyses to evaluate zone of influence, gradient control, and time of travel at over ten municipal and twenty industrial sites throughout Iowa and at ten municipal well fields in Minnesota and Wisconsin. He has written several well field management plans as well as preparing vulnerability assessments at many of the sites. Mr. Hentges recently completed a wellhead protection area study under contract with the USEPA for the City of Eldora, Iowa.

He conducted groundwater modeling of gradient control wells with a spray irrigation evaporation system. He has performed groundwater modeling as required using MODFLOW, MODPATH, MOC, Random Walk, Plasm, GWFL3D and GWTR3D simulation programs to model groundwater flow and contaminant transport during assessments and remedial well design and operations. He has designed and managed several remedial cleanup projects that included aquifer pumping test analyses to evaluate zone of influence, gradient control and contaminant transport. His efforts in surface and groundwater modeling have led to effective programs for long term monitoring and management of remedial design implementation.

He was the project manager for an assessment of impacted groundwater from buried gasometer/residues and light non-aqueous phase liquid impacts at two coal tar sites. Mr. Hentges subsequently provided geophysical assessment, remedial investigation and mitigation services to the Cities of Newton and Davenport, Iowa during remedial activities at former manufactured gas plant sites. He represented the client in on-site observation/documentation of gasometer remedial activities, groundwater treatment design, evaluation and consultation relative to a removal action (RA) of the gasometer and cost estimation relative to negotiating joint technical and financial responsibility for the project.

Mr. Hentges has been the project manager for several industrial sites where he planned and implemented investigations, assessments and remedial designs including the Naval Ordinance Facility and Whitaker Solvent cleanups in Fridley, Minnesota; the John Deere Moline Plow Works in Rock Island, Illinois; the J.I. Case Plant in Burlington, Iowa; Firestone Tire and Rubber Company, Parr Manufacturing and Gate Rubber Company in Des Moines, Iowa and several others.

PROJECT EXPERIENCE (CONTINUED)

Mr. Hentges has assisted several sanitary landfills and agricultural clients with local zoning approval and the technical submittals required by the regulatory agencies. He has successfully represented clients at several public meetings and informational hearings regarding permit issues, livestock facility siting and asphalt batch plant operations. He has performed expert witness services on ten litigation projects covering livestock facilities, landfills, chemical plants and water resource issues.

EDUCATION

Bachelor of Science, Hydrology, 1983, University of Arizona
Post Graduate Work, Hydrology, 1984, University of Arizona

AFFILIATIONS

National Water Well Association
Association of Groundwater Scientists and Engineers
American Water Works Association
Iowa Groundwater Association

WORK HISTORY

Terracon, Senior Project Manager, 1989-present
James M. Montgomery Consulting Engineers, Inc., Project Hydrogeologist, 1983-1989
University of Arizona, Research Assistant, 1980-1983

PUBLICATIONS

Hentges, Gerald T., F. Thies, T.S. Lemar, A Case History: The Use of an Uncovered Windrow Compost Facility as a Bioreactor for Municipal Solid Waste Landfill Leachate (17th Annual International Madison Waste Conference, Municipal and Industrial Waste, University of Wisconsin, Madison, Wis., Sept. 21-22, 1994).

Hentges, Gerald T., F. Thies, T.S. Lemar, Leachate Extraction Well Assessments, Des Moines Metropolitan Park East and Hamilton County Sanitary Landfill (16th Annual International Madison Waste Conference, Municipal and Industrial Waste, University of Wisconsin, Madison, Wis., Sept. 22-23, 1993).

Hentges, Gerald T., F. Thies, T.S. Lemar, Leachate Extraction Well Assessment, Des Moines Metropolitan Solid Waste Agency, Des Moines Metro Park East Sanitary Landfill, Des Moines, Iowa (12th Annual Conference of The Solid Waste Association of North America/Iowa Society of Solid Waste Operations Chapter, Sept. 16-18, 1992).

Joseph M Turner
30226 Whippoorwill Road
Neola, Iowa 51559
712-485-2621 Home Telephone
712-485-2052 Work Telephone
712-310-0633 Cell. Telephone
jturnerag@msn.com

Turner's Ag Consulting Company, 2004 to present
Owner of Turner's Ag Consulting, Duties include: Crop Scouting, Soil sampling, GPS mapping, Manure Management, Nutrient Management, and Complete Consulting Service on a fee-based schedule, GPS, Yield Monitor, Precision Ag sales and service.

Agronomist/Agriculture Sale, Underwood Farm Supply, 2001-Dec. 2003
Duties include: Nutrient Management, field sales of Fertilizer, Ag-Chemicals, Seed and Services. Field service calls on diagnostic problems and solutions, customer relations, creating and maintaining precision agriculture services.
Developing a precision based program to fit all growers, developed and maintained an excellent field-by-field programs for what seed, fertilizer, chemical, and services best fit the field and grower.

Agronomist/Agriculture Chemical Manager, Farm Service Company, 1999-2001
Duties include, Nutrient Management, Inventory management of ag-chemicals, pricing and programs of ag-chemicals. Field service calls on herbicide injury, weed control, insect problems, diseases, and crop growth development problems. Sales of fertilizers, precision agriculture, seed, ag-chemicals, and custom services.

Crop Management Specialist, Farm Service Company, 1993-1999
Duties included: Nutrient Management, sales of precision agriculture, Fertilizers, ag-chemicals, seed, custom application, Pricing of ag-chemicals, setting up and managing intense crop scouting program. Yield monitor sales and service.

Field Crop Scout, Farm Service Company, 1990-1993
Duties included monitoring corn and soybean acres on a weekly basis reporting the results both to the producer and to management.

Education
Northwest Missouri State University, Maryville, Missouri 1991-1993, Agronomy/Ag-Business, Bachelor of Technology
Iowa Western Community College, Council Bluffs, Iowa 1989-1991, Agriculture Studies Associate Degree

Professional Associations/Training

Nebraska Certified Crop Production Advisor
National Alliance of Independent Crop Consultant (Government Affairs Committee)

Iowa Independent Crop Consultant Association

West Pottawattamie Farm Bureau Vice-President

Iowa Corn and Soybean Initiative Member

Iowa Soybean Association

Iowa Corn Grower Association

Pottawattamie Cattleman's Association

NRCS Module 7 Training (includes Nutrient and Pest Management)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

JUN 14 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Frank Moran, Assistant Vice President
Moran Beef, Incorporated
25794 Magnolia Road
Underwood, Iowa 51576

Re: Clean Water Act Section 308 Information Request
Moran Beef, Inc., SE ¼, Section 17, Township 76 North, Range 42 W
Pottawatomie County, Iowa

Dear Mr. Moran:

The Environmental Protection Agency (EPA) seeks your assistance in providing information regarding your compliance with the federal Clean Water Act (CWA).

In your "Answer and Request For Hearing," filed April 30, 2010, you indicated that "(a)ny pollutants that are in the samples collected (by EPA) are more likely than not to have come from the more than twenty acres of cornfield that drain to (the) discharge point." In order for pollutant discharges from land application areas to be allowed under the CWA's agricultural stormwater exemption, you must implement site-specific nutrient management practices to ensure that manure and process waste water are applied at agronomic rates. Discharges of pollutants to waters of the United States that result from your failure to do this are violations of the CWA. You have alleged that the high nutrient concentrations identified by EPA in the unnamed tributary to Mosquito Creek are from the cornfield. EPA asserts that the high nutrient concentrations either came from your production area or were the result of a failure to implement appropriate site-specific nutrient management practices.

In order to evaluate your nutrient management practices, EPA requests that you answer the questions and provide the information and/or documents requested in the enclosed Information Request. Section 308 of the CWA, 33 U.S.C. § 1318, authorizes EPA to request information from any person to determine compliance with the CWA. Moreover, 40 C.F.R. § 122.23(e) requires unpermitted large CAFOs, like yours, to maintain land application documentation and make such documentation available upon request. Pursuant to Section 308 and 40 C.F.R. § 122.23(e), EPA requests that you respond to this Information Request within 14 days of your receipt of this Request. Also, your response to this request must be accompanied by

the enclosed Statement of Certification. The certificate must be signed and dated by you and notarized by a certified notary public.

Please send your response and signed certificate to:

Stephen Pollard
U.S. Environmental Protection Agency
Water, Wetlands and Pesticides Division
901 North 5th Street
Kansas City, Kansas 66101.

The information requested herein must be provided even though you may contend that it includes confidential business information or trade secrets. You may assert a confidentiality claim covering part or all of the information requested, pursuant to Section 308 of CWA and 40 C.F.R. § 2.203(b). A confidentiality claim requires certain steps on your part to justify such a claim. If EPA determines that submitted information is confidential business information, EPA will take steps to protect the confidential portions of the submitted information. Information covered by such claim will be disclosed by EPA only to the extent permitted by CWA Section 308. If no such claim accompanies the information when it is received by EPA, then it may be made available to the public by EPA without further notice to you.

Although EPA seeks your cooperation, compliance with this Information Request is required by law. Failure to provide all the information required or the making of any false material statements or representation in response to this letter, constitute violations of Section 308 of the CWA, and may result in an enforcement action and the imposition of civil and/or criminal penalties pursuant to Section 309 of the CWA, 33 U.S.C. § 1319.

If you have any questions or need additional information, please contact Stephen Pollard at 913-551-7582.

Sincerely,

Karen A. Flournoy

for William A. Spratlin
Director
Water, Wetlands, and Pesticides Division

Enclosures

cc: Dan Stipe, Iowa Department of Natural Resources, Field Office # 4

Information Request

1. Please provide a list of all land application fields utilized, in the last three years, for the land application of manure, litter, and/or process wastewater from the open feedlot portion of your facility. For each field, provide the following information and include any documents applicable to this information:

    a. Field designation;

    b. Legal description;

    c. Total number of acres in the field and total number of acres available for land application;

    d. All soil analyses/test results; and

    e. A description of any commercial fertilizer applied in addition to manure, litter and/or process wastewater. Include the type of fertilizer, the date of its application, and rate at which it was applied.

2. Please provide a list of all land application events, in the last three years, of manure, litter and/or process wastewater from both the confinement and open feedlot operations at your facility. For each land application event, provide the following information:

    a. Field designation;

    b. Crop at time of land application;

    c. Estimated and/or actual yields;

    d. Application method;

    e. Source (Confinement or Open Feedlots);

    f. Type (liquid or solid) and quantity of manure, litter and/or process wastewater applied;

    g. Date of land application event;

    h. Land application rate; and

    i. Total number of acres land applied to.

3. Please provide all analysis/test results, performed in the last three years, on manure, litter and/or process wastewater associated with both the confinement and open feedlot operations at your facility.

4. If any of manure, litter and/or process wastewater was transferred (sold or given away) in the last five years, please provide copies of the nutrient analyses provided to the recipient. Also provide the transfer date, recipient's name and address, and the amount transferred.

STATEMENT OF CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

_____ _____

Signature Date

_____

Printed Name

_____

Official Title

INFORMATION REQUEST RESPONSES
MORAN BEEF, INC.

Request No. 1

A. Underwood 1a
B. E1/2 of sec 17, 76N, 42W Pottawattamie Co.
C. 180.38 acres
D. See attached Midwest Lab Soil Analysis Reports, Sample ID's 1-26
E. Anhydrous ammonia was applied to supplement the nitrogen in the fall of 2008, the spring of 2009, and 2010 at a rate of 100# per acre.

Request No. 2
Confinement

A. Neola North
B. Corn
C. 225 bushel
D. Broadcast
E. Confinement
F. Solid
G. Feb. 8, 9, Mar 24 2008
H. 22 ton
I. 39 acres

A. Neola West
B. Corn
C. 210 bushel
D. Broadcast
E. Confinement
F. Solid
G. Mar. 25, 26, 30, April 1, 2008
H. 22 ton
I. 95 acres

A. Underwood 2
B. Corn
C. 225 bushel
D. Broadcast
E. Confinement
F. Solid
G. Oct. 30, Nov. 2, 3, 4, 2008
H. 22 ton
I. 138 acres

A. Underwood 1
B. Corn
C. 200 bushel

D. Broadcast
E. Confinement
F. Solid
G. Nov. 14, 15, 2008
H. 22 ton
I. 42 acres

A. Neola West
B. Corn
C. 190 bushel
D. Broadcast
E. Confinement
F. Solid
G. Mar. 25, 26, 27, 28, 2009
H. 22 ton
I. 84 acres

A. Underwood 2
B. Corn
C. 225Bu
D. Broadcast
E. Confinement
F. Solid
G. April 3, 4, 2009
H. 22 ton
I. 27 acres

A. Underwood 1
B. Corn
C. 210 bu
D. Broadcast
E. Confinement
F. Solid
G. Oct. 26, 27, 2009
H. 22 ton
I. 60 acres

A. Neola South
B. Corn 190 bushel
C. Broadcast
D. Confinement
E. Solid
F. Mar. 15, 16, 2010
G. 22 ton
H. 45 acres

A. Underwood 2
B. Corn
C. 210 bushel
D. Broadcast
E. Confinement
F. Solid
G. April 10, 11, 12, 13, 2010
H. 22 ton
I. 128 acres

A. Underwood 1
B. Corn
C. 225 bushel
D. Broadcast
E. Confinement
F. Solid
G. April 17, 2010
H. 22 ton
I. 21 acres

Request No. 2
Open Feedlot

A. Underwood 1A
B. Corn
C. 220 bu
D. Broadcast
E. Open feedlot
F. Solid
G. Oct 27, 28, 29, Nov. 2, 3, 2008
H. 22 ton
I. 108 acres

A. Underwood 1A
B. Corn
C. 220 bu
D. Broadcast
E. Open feedlot
F. Solid
G. April 7, 8, 2009
H. 22 ton
I. 43 acres

A. Underwood 1A
B. Corn
C. 220 bu
D. Broadcast
E. Open feedlot
F. Solid
G. Nov. 19, 20, 21, 22, 2009
H. 22 ton
I. 82 acres

A. Underwood 1A
B. Corn
C. 220 bu
D. Broadcast
E. Open feedlot
F. Solid
G. April 1, 2, 3, 2010
H. 22 ton
I. 65 acres

A. Underwood 1A
B. Corn
C. 220 bu
D. Broadcast
E. Open feedlot
F. Solid (settling basin)
G. April 18, 19, 2010
H. 22 ton
I. 15 acres

Request No. 3
See attached.

Request No. 4
Not applicable.

STATEMENT OF CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Frank Moran

Signature

Date 7-15-10

Frank Moran

Printed Name

V.P.

Official Title

Subscribed and sworn to me this 15th day of July, 2010.

CONNIE S. PAYNE
Commission Number 191486
MY COMMISSION EXPIRES
5-15-2013

Connie S. Payne

Notary Public

MANURE ANALYSIS/TEST RESULTS

RESPONSE TO REQUEST NO. 3

Midwest Report Number: 08-087-5126
Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-
Sample ID: 51

MIDWEST Interactive Database for Midwest Water Environmental & Soil Testing

MORAN BEEF

Date Reported: Mar 27, 2008
Date Received: Mar 25, 2008
Lab Number: 10008174

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

Parameters	Analysis as Received	Nutrients lbs/ton	Est. First Year Availability lbs/ton
Ammonium Nitrogen (N)	0.29 %	5.8	3
Organic Nitrogen (N)	0.92 %	18.4	6
Total Nitrogen (N)	1.21 %	24.2	9
Phosphorus (P_2O_5)	0.70 %	14.1	10
Potassium (K_2O)	0.63 %	12.6	11
Sulfur (S)	0.19 %	3.8	2
Calcium (Ca)	0.79 %	15.8	11
Magnesium (Mg)	0.19 %	3.7	3
Sodium (Na)	0.09 %	1.7	1
Copper (Cu)	19 ppm	0.04	0.03
Iron (Fe)	776 ppm	1.55	1.09
Manganese (Mn)	85 ppm	0.17	0.12
Zinc (Zn)	92 ppm	0.18	0.13
Moisture	68.0 %		
Total Solids	32.0 %	640.0	
Total Salts		39.6	
pH	8.8		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.
Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.
Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!
Nitrogen availability will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest

Report Number: 08-087-5096

Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

Sample ID: 100

Project PO :

MIDWEST
Midwest Interactive Database for Water Environmental & Soil Testing

Date Reported: Mar 27, 2008

Date Received: Mar 25, 2008

MORAN BEEF

Lab Number: 10008170

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/ton	lbs/ton
Ammonium Nitrogen (NH_4)	<0.0 %	0.1	0
Organic Nitrogen (N)	1.11 %	22.1	8
Total Nitrogen (N)	1.11 %	22.2	8
Phosphorus (P_2O_5)	0.98 %	19.6	14
Potassium (K_2O)	0.81 %	16.3	15
Sulfur (S)	0.26 %	5.1	2
Calcium (Ca)	1.06 %	21.2	15
Magnesium (Mg)	0.29 %	5.9	4
Sodium (Na)	0.11 %	2.3	2
Copper (Cu)	22 ppm	0.04	0.03
Iron (Fe)	1840 ppm	3.68	2.58
Manganese (Mn)	167 ppm	0.33	0.23
Zinc (Zn)	131 ppm	0.26	0.18
Moisture	64.0 %		
Total Solids	36.0 %	720.0	
Total Salts		45.8	
pH	7.8		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.

Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!

Nitrogen availability will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Midwest

Report Number: 09-048-5425

Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

Sample ID: SAMPLE 1

Project PO :

MIDWEST Interactive Database for Midwest Water Soil Testing Environmental

MANURE ANALYSIS

Date Reported: Feb 17, 2009

Date Received: Feb 13, 2009

Lab Number: 10019224

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Est. First Year Availability
Parameters	as Received	lbs/ton	lbs/ton
Ammonium Nitrogen (N)	0.09 %	1.8	1
Organic Nitrogen (N)	0.20 %	4.0	1
Total Nitrogen (N)	0.29 %	5.8	2
Phosphorus (P_2O_5)	0.64 %	12.8	9
Potassium (K_2O)	0.51 %	10.2	9
Sulfur (S)	0.11 %	2.2	1
Calcium (Ca)	2.26 %	45.2	32
Magnesium (Mg)	0.85 %	17.0	12
Sodium (Na)	0.04 %	0.7	0
Copper (Cu)	30 ppm	0.06	0.04
Iron (Fe)	11114 ppm	22.23	15.56
Manganese (Mn)	612 ppm	1.22	0.86
Zinc (Zn)	113 ppm	0.23	0.16
Moisture	41.0 %		
Total Solids	59.0 %	1180.0	
Total Salts		74.9	
pH	9.0		

n.d. Non Detect

First year availability of nitrogen is calculated based on pre-plant application with incorporation. Nitrogen available from previous year's application not considered.

Total manure salts should not exceed 500 lbs/acre. Less than 500 lbs/acre if annual rainfall is less than 25 inches and/or the soil CEC is less than 12 meq/100g. Salt contributions from commercial fertilizer applications must also be considered.

Soil test yearly to monitor phosphorus levels, organic matter, pH, and micronutrients. Spring soil test for residual nitrate - make accurate sidedress recommendations!

Nitrogen availabilty will vary with methods of application and field conditions. The nitrogen availability values used on a manure management plan must comply with state regulations. These regulations vary from state to state.

Report Number: 09-173-2199
Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

MIDWEST Interactive Database for Water Soil Testing Environmental & Midwest

F MORAN

Date Reported: Jun 22, 2009
Date Received: Jun 16, 2009
Lab Number: 1587799

Sample ID: WEST

Project PO :

Bio-Solids Analysis Report
VIEW YOUR SUBMITTAL FORM

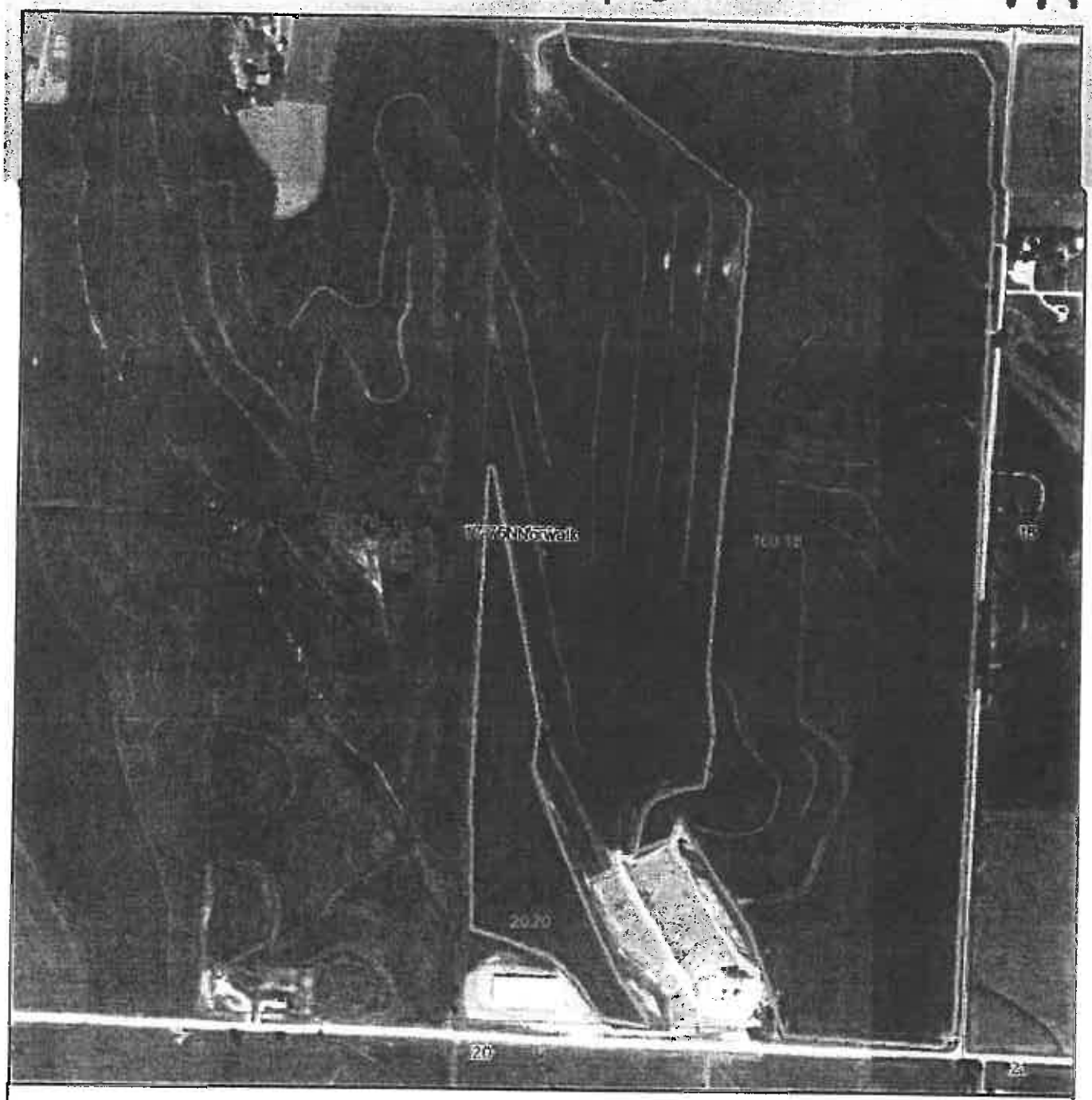
	Analysis	Nutrients	Nutrients
Parameters	as Received	lbs/acre inch	lbs/1000gals
Ammonium Nitrogen (N)	56 ppm	12.6	0.47
Organic Nitrogen (N)	3 ppm	0.7	0.03
Total Nitrogen (N)	59 ppm	13.3	0.50
Phosphorus (P_2O_5)	80 ppm	17.9	0.7
Potassium (K_2O)	569 ppm	128.3	4.8
Sulfur (S)	110.6 ppm	24.9	0.93
Calcium (Ca)	82.6 ppm	18.6	0.70
Magnesium (Mg)	55.6 ppm	12.5	0.47
Sodium (Na)	124.7 ppm	28.1	1.05
Copper (Cu)	0.2 ppm	0.05	0.01
Iron (Fe)	20.2 ppm	4.56	0.17
Manganese (Mn)	1.0 ppm	0.22	0.01
Zinc (Zn)	0.6 ppm	0.14	0.01
pH	6.7		
Conductance	2.87 mS/cm		

n.d.= Non Detected

Research suggest that when Lagoon Water is applied by irrigation, conductance values of 6 mS/cm or less should be safe for corn and soybeans at all growth stages; conductance values up to 12 mS/cm should be safe for soybeans and corn by late July.

DOCUMENTS APPICABLE TO INFORMATION REQUESTED IN REQUEST NO. 1

Aerial Map UNDERWOOD IA



map center: 41° 22' 59.21, 95° 41' 52.06
scale: 9662

Maps provided by:
surety

17-76N-42W
W Pottawattamie
Iowa

N
W E
S

7/30/2010

www.AgriDataInc.com

Field borders provided by Farm Service Agency as of 5/21/2008. Aerial photography provided by Aerial Photograpy Field Office.

REPORT NUMBER 10-092-0832
ANALYSIS DATE APR 6, 2010
ACCOUNT NO 16064

Midwest Laboratories
4611 "S" Street • Omaha, Nebraska 68144-3693
(402) 334-7770 • FAX (402) 334-9121 • www.midwestlabs.com

PAGE 1/3
REPORT DATE JUL 14, 2010
COPY TO
2nd COPY TO

GROWER
FM

TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA
51559-

Sample for UNDERWOOD #1A

SOIL ANALYSIS REPORT
VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER		PHOSPHORUS P_1 (WEAK BRAY 1:7)		PHOSPHORUS P_2 (STRONG BRAY 1:7)		BICARBONATE P (OLSEN)		POTASSIUM (NEUTRAL AMMONIUM ACETATE EXCHANGEABLE) K		MAGNESIUM Mg		CALCIUM Ca		SODIUM Na		pH SOIL pH	pH BUFFER INDEX	CATION EXCHANGE CAPACITY C.E.C.	PERCENT BASE SATURATION (COMPUTED) %K	%Mg	%Ca	%H	%Na
		PERCENT	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE			meq/100g					
21519523	1	1.7	L	51	VH	128	VH	35	VH	250	VH	604	VH	2497	H			7.2		18.1	2.6	27.3	69.2		
21519524	2	2.2	L	51	VH	103	VH	31	VH	280	VH	614	VH	3028	H			7.0		21.0	3.5	24.4	72.1		
21519525	3	2.6	M	79	VH	120	VH			301	VH	476	VH	2333	M			6.3	6.7	16.3	4.5	21.7	63.7	10.4	
21519526	4	2.4	L	20	M	42	H			224	VH	327	VH	1945	M			5.8	6.6	16.1	3.6	18.9	60.4	19.1	
21519527	5	2.7	M	53	VH	90	VH			264	VH	464	VH	2235	M			6.3	6.7	17.5	3.9	22.1	63.9	10.1	
21519528	6	2.6	M	56	VH	93	VH			283	VH	400	VH	2228	M			6.4	6.8	16.7	4.3	20.0	60.7	9.0	
21519529	7	2.8	M	45	VH	79	VH			259	VH	368	VH	2010	M			5.9	6.6	16.6	4.0	18.5	60.5	17.0	
21519530	8	2.7	M	45	VH	79	VH			270	VH	408	VH	2042	M			6.2	6.7	16.0	4.3	21.2	63.8	10.7	
21519531	9	1.7	L	38	VH	140	VH	29	VH	273	VH	565	VH	3063	H			7.6		20.6	3.4	22.6	74.0		
21519532	10	2.1	L	59	VH	134	VH	36	VH	265	VH	500	VH	2814	H			7.3		19.6	3.5	25.1	71.4		

Sample ID	NITRATE-N (N14) Surface ppm	Surface lbs/A	Surface depth IN	Sub 1 ppm	Sub 1 lbs/A	Sub 1 depth IN	Sub 2 ppm	Sub 2 lbs/A	Sub 2 depth IN	Total lbs/A	SULFUR S (PHOS) ppm	SULFUR RATE	ZINC Zn (DTPA extract) ppm	ZINC RATE	MANGANESE Mn ppm	MANGANESE RATE	IRON Fe ppm	IRON RATE	COPPER Cu ppm	COPPER RATE	BORON B ppm	BORON RATE	EXCESS LIME RATE	SOLUBLE SALTS mmhos/cm	SOLUBLE SALTS RATE
1			0-6								9	L													
2			0-6								11	L													
3			0-6								14	M													
4			0-6								14	M													
5			0-6								14	M													
6			0-6								13	M													
7			0-6								23	H													
8			0-6								16	M													
9			0-6								10	L													
10			0-6								10	L													

REPORT NUMBER 10-092-0832
ANALYSIS DATE APR 6, 2010
ACCOUNT NO. 16064

Midwest Laboratories
13611 "B" Street • Omaha, Nebraska 68144-3693
(402) 334-7770 • FAX (402) 334-9121 • www.midwestlabs.com

PAGE 2/3
REPORT DATE JUL 14, 2010
COPY TO
2nd COPY TO

GROWER
FM

TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA
51559-

SOIL ANALYSIS REPORT
VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER		PHOSPHORUS						NEUTRAL AMMONIUM ACETATE EXTRACTABLE								pH		CATION EXCHANGE CAPACITY	PERCENT BASE SATURATION (COMPUTED)				
				P_1		P_2		BICARBONATE P OLSEN		POTASSIUM		MAGNESIUM		CALCIUM		SODIUM		SOIL	BUFFER		% K	% Mg	% Ca	% H	% Na
		PERCENT	RATE	BRAY ppm	RATE	STERLING MEHLICH 3 ppm	RATE	ppm	RATE	K ppm	RATE	Mg ppm	RATE	Ca ppm	RATE	Na ppm	RATE	pH	INDEX	C.E.C meq/100g					
21519533	11	2.5	L	16	M	87	VH	11	M	207	VH	502	VH	2105	H			7.4		14.3	3.7	22.8	73.5		
21519534	12	2.5	L	17	M	74	VH			235	VH	490	VH	2626	M			6.1	6.6	20.7	3.0	19.7	63.4	13.9	
21519535	13	2.1	L	22	H	117	VH	9	L	244	VH	428	VH	3273	H			7.4		20.5	3.1	17.3	79.6		
21519536	14	2.3	L	49	VH	120	VH	21	H	247	VH	422	VH	3252	H			7.7		20.4	3.1	17.2	79.7		
21519537	15	2.4	L	36	VH	102	VH			232	VH	465	VH	2515	H			6.5		17.0	3.5	22.8	73.7		
21519538	16	2.2	L	33	VH	56	H	18	H	189	VH	374	VH	2377	H			7.3		15.5	3.3	20.1	76.6		
21519539	17	2.8	M	67	VH	121	VH			353	VH	464	VH	2355	M			6.2	6.7	18.9	4.8	20.6	62.6	12.0	
21519540	18	2.5	L	44	VH	88	VH			225	VH	304	VH	1607	L			5.2	6.4	17.0	3.4	14.9	47.3	34.4	
21519541	19	2.6	M	47	VH	70	VH			290	VH	340	VH	1836	M			5.4	6.5	17.9	4.2	15.8	51.3	28.7	
21519542	20	2.4	L	111	VH	137	VH	146	VH	472	VH	609	VH	2789	M			7.9		18.2	6.6	27.9	75.5		

Sample ID	NITRATE-N (PSNT)									SULFUR S		DTPA Extraction ZINC Zn		MANGANESE Mn		IRON Fe		COPPER Cu		BORON B		EXCESS LIME RATE	SOLUBLE SALTS mmhos/ cm	
	Surface			Sub 1			Sub 2			Total															
	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	ppm	lbs/A	depth IN	lbs/A	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE			
11			0-6								10	L													
12			0-6								18	M													
13			0-6								16	M													
14			0-6								10	L													
15			0-6								12	L													
16			0-6								8	L													
17			0-6								14	M													
18			0-6								21	H													
19			0-6								19	H													
20			0-6								13	M													

REPORT NUMBER 10-085-0171
ANALYSIS DATE MAR 30, 2010
ACCOUNT NO 16084

Midwest Laboratories
13611 "B" Street • Omaha, Nebraska 68144-3693
(402) 334 7770 • FAX (402) 334 9121 • www.midwestlabs.com

PAGE 3/3
REPORT DATE JUL 15, 2010
COPY TO
2ND COPY TO

GROWER
M

TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA
51559-

SOIL ANALYSIS REPORT
VIEW YOUR SUBMITTAL FORM

LAB NUMBER	SAMPLE IDENTIFICATION	ORGANIC MATTER		PHOSPHORUS P_1		PHOSPHORUS P_2		BICARBONATE P		POTASSIUM K		MAGNESIUM Mg		CALCIUM Ca		SODIUM Na		pH SOIL pH	pH BUFFER INDEX	CATION EXCHANGE CAPACITY C.E.C.	PERCENT BASE SATURATION (COMPUTED) % K	% Mg	% Ca	% H	% Na
		PERCENT	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE	ppm	RATE			meq/100g					
21472766	21	2.1	L	82	VH	129	VH			311	VH	471	VH	3305	H			6.9		21.2	3.9	18.5	77.7		
21472767	22	1.9	L	121	VH	134	VH	56	VH	323	VH	572	VH	2856	H			7.0		19.0	4.2	24.0	71.8		
21472768	23	2.9	M	191	VH	192	VH			477	VH	501	VH	2331	M			6.4	6.7	18.8	6.5	22.2	62.0	9.3	
21472769	24	2.8	M	168	VH	125	VH			324	VH	427	VH	2287	M			6.3	6.7	17.7	4.7	20.1	64.6	10.6	
21472770	25	1.6	L	54	VH	130	VH	37	VH	210	H	677	VH	2809	H			7.1		20.2	2.7	27.9	69.4		
21472771	26	1.4	VL	23	H	120	VH	24	VH	209	H	670	VH	2910	H			7.5		20.7	2.6	27.0	70.4		

Sample ID	NITRATE-N (PAI) Surface ppm	Surface lbs/A	Surface depth IN	Sub 1 ppm	Sub 1 lbs/A	Sub 1 depth IN	Sub 2 ppm	Sub 2 lbs/A	Sub 2 depth IN	Total lbs/A	SULFUR S (CaH2PO4) ppm	SULFUR RATE	ZINC (DTPA Extraction) Zn ppm	ZINC RATE	MANGANESE Mn ppm	MANGANESE RATE	IRON Fe ppm	IRON RATE	COPPER Cu ppm	COPPER RATE	BORON B ppm	BORON RATE	EXCESS LIME RATE	SOLUBLE SALTS 1:1 mmhos/cm	SOLUBLE SALTS RATE
21			0-6								15	M													
22			0-6								12	L													
23			0-6								15	M													
24			0-6								12	L													
25			0-6								10	L													
26			0-6								8	L													

Subject animal feeding operation Cattle question

I am inquiring about the epa rules in Iowa, the situation is that I have a custumer with 990 head open feedlot and 1000 feet away (with crop in between it) a 960 bedded confinment open barn, what is the requirments for that or where can I find out thank you

Joe Turner
Turner's Ag Consulting Co.
712-310-0633 phone
712-485-2052 Fax

2/8/2010

From: <Porter.Donna@epamail.epa.gov>
To: <jturnersag@msn.com>
Sent: Thursday, April 30, 2009 9:13 AM
Subject: Re: animal feeding operation Cattle question

"Two or more AFOs under common ownership ARE considered ONE operation if, among other things, they adjoin each other. This can include

- Facilities that are separated by a right-of-way or public road
- Facilities that **use a common area or system for the disposal of wastes**. For example operations with a common manure and wastewater storage and handling system in which the manure, litter, or process wastewater are commingled (e.g. **stored in the same pond, lagoon, or pile or land applied on common fields)."**

-We consider the entire footprint of an operation when determining of two or more AFOs are under common ownership. They do not have to be adjoined by the production area. If two AFOs are separated by 1,000 acres of crops, all under the same ownership, they are still considered one operation.

Additionally, in a Q&A supplement to the Permit Writer's Guidance these questions regarding specific scenarios were answered.

Question: Are two adjoining AFOs considered to be one facility or two? If two operations owned by the same person are separated by several miles of land not owned by this person, is the mere fact that the person spreads waste from both operations on the same ground enough for these facilities to be considered one operation?
Answer: Under the regulations, two AFOs under common ownership are considered one operation for permitting purposes if they adjoin each other or use a common area or system for waste disposal. In the first example, the two adjoining AFOs are considered to be a single operation if they are under common ownership. In the second example, the two operations are also considered to be a single operation because they are under common ownership and use a common area for waste disposal.

Question: How are operations with multiple farms regulated? For example, someone owns and operates one farm that has three chicken houses and also operates a leased farm 10 miles away with another three chicken houses. Even though the farmer manages more than 125,000 chickens in total at any one time, neither of the two farms houses more than 100,000 chickens. The two farms do not use a common manure handling system. Is this farmer operating a CAFO?
Answer: In the example, since the two farms do not adjoin each other and do not use a common area or system for waste disposal, the two operations would not be considered to be a single AFO for purposes of determining the number of animals. Therefore, as long as they do not use liquid manure handling systems, neither of the farms would meet the definition of a Large CAFO [40
CFR 122.23(b)].

Question: If a single farm has six chicken houses with more than 125,000 birds and the houses are managed by two different people, is the farm considered a CAFO?
Answer: In this example, the chicken houses are part of a single operation and presumably use a common area or system for the disposal of wastes; therefore, the entire operation is a Large CAFO. The number of managers is not relevant.

Donna Porter
Phone: (913) 551-7929
Fax : (913) 551-9929
porter.donna@epa.gov
WWPD/WIMB

From: <Urban.Trevor@epamail.epa.gov>
To: <jturnersag@msn.com>
Sent: Monday, June 29, 2009 1:32 PM
Attach: moran.docx
Subject: Re: Moran Beef

Thank you for the information, I will pass it on to the compliance officers.

<jturnersag@msn.com>

06/29/2009 12:31 PM

To
Trevor Urban/R7/USEPA/US@EPA
cc

Subject
Moran Beef

Trevor is what we have been doing to watch the situation, Please repond to let me know that you received the email
Thank you

Joe Turner
Turner's Ag Consulting Co.
712-310-0633 phone
712-485-2052 Fax(See attached file: moran.docx)

From: <jturnersag@msn.com>
To: "Urban.Trevor" <Urban.Trevor@epamail.epa.gov>
Sent: Monday, June 29, 2009 11:31 AM
Attach: moran.docx
Subject: Moran Beef

Trevor Is what we have been doing to watch the situation, Please repond to let me know that you received the email
Thank you

Joe Turner
Turner's Ag Consulting Co.
712-310-0633 phone
712-485-2052 Fax

To:

Trevor Urban

RCRA inspector EPA

From:

Moran Beef

Joe Turner, Turner's Ag Consulting

Subject: EPA Visit at Moran Beef (Site 64122 open lot and confinement feedlot)

At Moran Beef feeding operation in Norwalk Township, Pottawattamie county, The site was inspected by Trevor Urban of the EPA. Trevor had pointed out what should be done and that the site needed total containment on both liquid and solid according to CAFO Rules. Previously on or about April 24 the IDNR made a visit and also stated that according to laws passed Dec 31 2008 total containment needed to be completed to comply with IDNR rules. At this point and time Moran Beef are in the beginning stages of putting a plan together for methods that will comply with state and federal rules. Upon starting any construction or filing of papers, Moran Beef is awaiting the final report from the EPA (expected 45 days after visit). Prior to and since the visit methods have been in place and added to prevent any waters of the states being contaminated by discharge.

Previously on the west side of the feedlot the water is filtered through a 20-25 foot wide grass strip approximately 2700 feet and then released through the crop ground and has approximately 18-20 acres of crop to filter before it hits a culvert (1200 feet). On the east side of feedlot the water is filtered approximately 1250 feet through the grass strip and then down a grass strip about 1000 feet. The grass areas were recently mowed and hayed allowing for regrowth and more nutrient uptake into those areas.

A onetime one event sample was taken on the west side following a 2.25 inch rain event; samples of water flowing through the strips were taken at the beginning, middle, and end. Nitrogen reading was 37 ppm front, 12 ppm middle, and 3 toward the end. The samples were taken about 2 hours after the rain had stop, the water had not reached the end of the strip, and flowed through the crop. It was not observed it had ever reached the crop during this one event. Samples of water were caught by using a coffee can, the procedure was official but was used to give us idea of what was happening.

Results are pending at this time of sample of waters of the state taken at a different time (for our knowledge of the situation).

Also other methods put in place from Trevor's recommendations, grass was seeded around the confinement building, stalk residue cleaned up and piled.

Crop uptake of nutrients is also pending upon lab results of soil nutrient versus plant uptake.

2 other rainfall events have occurred since the visit no samples were taken, the water did not make it out of the filter strips.

At this time we feel we are doing what we can to prevent runoff into a water of the state. We are ready to go forward with total containment pending the EPA report.

If there is any other suggestion or ideas that can be implemented before we can complete the project we will be open to any all ideas.

Thank you for your time

Moran Beef

Turner's Ag Consulting Joe Turner 6/29/09

PO box 301 Neola Ia 51559

712-310-0633

Explanation of Sample Sheets

Page 1 - Taken out off the terrace on the Eastside after a rain - about 50 yards from the feedlot

Page 2 - Same as Page 1 but on the westside

Page 3 - later Date - same as Page 1

Page 4 - later Date - same as Page 2

Page 5 - #1 upstream, #2 tile line, #3 Downstream

Page 6 - Sample NO Rain
#1 tile line
#2 upstream

Number:
Reported to: TURNERS AG
CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

F MORAN

Date Received: Jun 16, 2009

Lab Number: 1587800

Sample ID: EAST

(1)

Project PO :

Bio-Solids Analysis Report
VIEW YOUR SUBMITTAL FORM

Parameters	Analysis as Received	Nutrients lbs/acre inch	Nutrients lbs/1000gals
Ammonium Nitrogen (N)	37 ppm	8.3	0.31
Organic Nitrogen (N)	89 ppm	20.1	0.75
Total Nitrogen (N)	126 ppm	28.4	1.06
Phosphorus (P_2O_5)	69 ppm	15.5	0.6
Potassium (K_2O)	397 ppm	89.6	3.4
Sulfur (S)	81.2 ppm	18.3	0.69
Calcium (Ca)	139.8 ppm	31.5	1.18
Magnesium (Mg)	64.8 ppm	14.6	0.55
Sodium (Na)	97.2 ppm	21.9	0.82
Copper (Cu)	0.2 ppm	0.05	0.01
Iron (Fe)	41.3 ppm	9.31	0.35
Manganese (Mn)	3.1 ppm	0.70	0.03
Zinc (Zn)	0.4 ppm	0.08	0.01
pH	6.8		
Conductance	2.28 mS/cm		

n.d.= Non Detected

Research suggest that when Lagoon Water is applied by irrigation, conductance values of 6 mS/cm or less should be safe for corn and soybeans at all growth stages; conductance values up to 12 mS/cm should be safe for soybeans and corn by late July.

Number:

Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

F MORAN

Date Received: Jun 16, 2009

Lab Number: 1587799

Sample ID: WEST

(2)

Project PO :

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

	Analysis	Nutrients	Nutrients
Parameters	as Received	lbs/acre inch	lbs/1000gals
Ammonium Nitrogen (N)	56 ppm	12.6	0.47
Organic Nitrogen (N)	3 ppm	0.7	0.03
Total Nitrogen (N)	59 ppm	13.3	0.50
Phosphorus (P_2O_5)	80 ppm	17.9	0.7
Potassium (K_2O)	569 ppm	128.3	4.8
Sulfur (S)	110.6 ppm	24.9	0.93
Calcium (Ca)	82.6 ppm	18.6	0.70
Magnesium (Mg)	55.6 ppm	12.5	0.47
Sodium (Na)	124.7 ppm	28.1	1.05
Copper (Cu)	0.2 ppm	0.05	0.01
Iron (Fe)	20.2 ppm	4.56	0.17
Manganese (Mn)	1.0 ppm	0.22	0.01
Zinc (Zn)	0.6 ppm	0.14	0.01
pH	6.7		
Conductance	2.87 mS/cm		

n.d.= Non Detected

Research suggest that when Lagoon Water is applied by irrigation, conductance values of 6 mS/cm or less should be safe for corn and soybeans at all growth stages; conductance values up to 12 mS/cm should be safe for soybeans and corn by late July.

Number: 09-188-2221

Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

Sample ID: M2

Project PO :

Water Soil Testing Environmental & Database for Interactive Midwest

Date Received: Jul 01, 2009

LAGOON ANALYSIS

Lab Number: 1594385

(3)

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

Parameters	Analysis as Received	Nutrients lbs/acre inch	Nutrients lbs/1000gals
Ammonium Nitrogen (N)	19 ppm	4.3	0.16
Organic Nitrogen (N)	4 ppm	0.9	0.03
Total Nitrogen (N)	23 ppm	5.2	0.19
Phosphorus (P_2O_5)	1 ppm	0.1	0.01
Potassium (K_2O)	5 ppm	1.2	0.01
Sulfur (S)	7.1 ppm	1.6	0.06
Calcium (Ca)	101.2 ppm	22.8	0.86
Magnesium (Mg)	28.7 ppm	6.5	0.24
Sodium (Na)	17.9 ppm	4.0	0.15
Copper (Cu)	n.d. ppm	0.00	0.01
Iron (Fe)	0.2 ppm	0.05	0.01
Manganese (Mn)	0.2 ppm	0.05	0.01
Zinc (Zn)	0.1 ppm	0.01	0.01
pH	7.6		
Conductance	.772 mS/cm		

n.d.= Non Detected

Research suggest that when Lagoon Water is applied by irrigation, conductance values of 6 mS/cm or less should be safe for corn and soybeans at all growth stages; conductance values up to 12 mS/cm should be safe for soybeans and corn by late July.

Report Number: 09-188-2220

Reported to: TURNERS AG CONSULTING CO
PO BOX 301
NEOLA
IA, 51559-

Sample ID: M1

Project PO :

MIDWEST Soil Testing Water Environmental & Database for Interactive Midwest

LAGOON ANALYSIS

Date Reported: Jul 07, 2009

Date Received: Jul 01, 2009

Lab Number: 1594384

(4)

Bio-Solids Analysis Report

VIEW YOUR SUBMITTAL FORM

Parameters	Analysis as Received	Nutrients lbs/acre Inch	Nutrients lbs/1000gals
Ammonium Nitrogen (N)	12 ppm	2.7	0.10
Organic Nitrogen (N)	2 ppm	0.5	0.02
Total Nitrogen (N)	14 ppm	3.2	0.12
Phosphorus (P_2O_5)	n.d. ppm	0.0	0.01
Potassium (K_2O)	3 ppm	0.7	0.01
Sulfur (S)	7.4 ppm	1.7	0.06
Calcium (Ca)	103.8 ppm	23.4	0.88
Magnesium (Mg)	29.4 ppm	6.6	0.25
Sodium (Na)	16.1 ppm	3.6	0.14
Copper (Cu)	n.d. ppm	0.00	0.01
Iron (Fe)	0.1 ppm	0.02	0.01
Manganese (Mn)	n.d. ppm	0.00	0.01
Zinc (Zn)	n.d. ppm	0.00	0.01
pH	7.8		
Conductance	.744 mS/cm		

n.d.= Non Detected

Research suggest that when Lagoon Water is applied by irrigation, conductance values of 6 mS/cm or less should be safe for corn and soybeans at all growth stages; conductance values up to 12 mS/cm should be safe for soybeans and corn by late July.

Reported to: TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA 51559-

Laboratories®

Sep 30, 2010
Date Sampled:

WATER ANALYSIS

(5)

Labnum	Sample ID	Analysis	Level Found	Units	Detection Limit	Method	Analyst	Date	Approved By	Date	QC Results
1764740	1	Ammonia nitrogen (total)	n.d.	mg/L	0.10	SM 4500-NH3 G	jjd8	10/05/10	jjd8	Oct 06, 2010	View
		Nitrate/Nitrite Nitrogen	9.2	mg/L	0.2	EPA 353.2	jjd8	10/04/10	jjd8	Oct 06, 2010	
		Total Kjeldahl nitrogen (TKN)	0.50	mg/L	0.50	PAI - DK 02	jjd8	10/04/10	jjd8	Oct 06, 2010	
1764741	2	Ammonia nitrogen (total)	n.d.	mg/L	0.10	SM 4500-NH3 G	jjd8	10/05/10	jjd8	Oct 06, 2010	View
		Nitrate/Nitrite Nitrogen	9.0	mg/L	0.2	EPA 353.2	jjd8	10/04/10	jjd8	Oct 06, 2010	
		Total Kjeldahl nitrogen (TKN)	n.d.	mg/L	0.50	PAI - DK 02	jjd8	10/04/10	jjd8	Oct 06, 2010	
1764742	3	Ammonia nitrogen (total)	n.d.	mg/L	0.10	SM 4500-NH3 G	jjd8	10/05/10	jjd8	Oct 06, 2010	View
		Nitrate/Nitrite Nitrogen	9.7	mg/L	0.2	EPA 353.2	jjd8	10/04/10	jjd8	Oct 06, 2010	
		Total Kjeldahl nitrogen (TKN)	n.d.	mg/L	0.50	PAI - DK 02	jjd8	10/04/10	jjd8	Oct 06, 2010	

Notes:
n.d. - Not Detected.

Comments		
The temperature upon receipt exceeded the regulatory level of 6 degrees C.	AUTO	2010-10-01 00:22:26

Report Number: 10-190-2124

Midwest Laboratories®

Date Reported: Jul 09, 2010

Date Received: Jul 07, 2010

Date Sampled:

(6)

Reported to: TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA 51559-

WATER SAMPLE

Labnum	Sample ID	Analysis	Level Found	Units	Detection Limit	Method	Analyst	Date	Approved By	Date	QC Results
1732405	#1	Nitrate/Nitrite Nitrogen	0.7	mg/L	0.2	EPA 353.2	JJd8	07/08/10	cmw2	Jul 09, 2010	View
1732406	#2	Nitrate/Nitrite Nitrogen	6.5	mg/L	0.2	EPA 353.2	JJd8	07/08/10	cmw2	Jul 09, 2010	View

Report Number: 09-308-2024

Date Reported: Nov 04, 2009
Date Received: Oct 31, 2009
Date Sampled: Oct 30, 2009

Reported to: TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA 51559-

MORAN BEEF

DOMESTIC WATER ANALYSIS

Sample ID 1 upStream

View QC

Lab Number 1644462

Level Exceeds EPA Limits	Problems Likely	Potential Problems	No Apparent Problems	Non-Detect
[redacted]		[redacted]	[redacted]	[redacted]

Analyte	SODIUM Na ppm	CALCIUM Ca ppm	MAGNESIUM Mg ppm	pH	NITRATE NITROGEN NO_3-N	SULFATE SO_4	CONDUCTIVITY mmhos/cm	TOTAL DISSOLVED SOILDS (TDS) ppm	HARDNESS gr/gallon	TOTAL COLIFORM MPN/100 mL	IRON Fe ppm	MANGANESE Mn ppm	CHLORIDE Cl ppm	COPPER Cu ppm	FLUORIDE F ppm
Level Found					9.0					200					
[redacted]					[redacted]					[redacted]					
Level Found					9.0					200					
Caution Level					10					1					

Comments		
Coliforms were ran on 10-31-09 at 1300.	arj0	2009-11-01 14:30:57

Report Number: 09-308-2025

Date Reported: Nov 04, 2009
Date Received: Oct 31, 2009
Date Sampled: Oct 30, 2009

Reported to: TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA 51559-

MORAN BEEF

DOMESTIC WATER ANALYSIS

Sample ID 2 t.\E /.mE

View QC

Lab Number 1644463

Level Exceeds EPA Limits	Problems Likely	Potential Problems	No Apparent Problems	Non-Detect
■		■	■	■

Analyte	SODIUM Na ppm	CALCIUM Ca ppm	MAGNESIUM Mg ppm	pH	NITRATE NITROGEN NO_3-N	SULFATE SO_4	CONDUCTIVITY mmhos/cm	TOTAL DISSOLVED SOILDS (TDS) ppm	HARDNESS gr/gallon	TOTAL COLIFORM MPN/100 mL	IRON Fe ppm	MANGANESE Mn ppm	CHLORIDE Cl ppm	COPPER Cu ppm	FLUORIDE F ppm
Level Found					n.d.					>200					
					—					—					
Level Found					n.d.					>200					
Caution Level					10					1					

Notes:
n.d. - Not Detected.

Comments		
Coliforms were ran on 10-31-09 at 1300.	arj0	2009-11-01 14:31:22

Report Number: 09-308-2027

Date Reported: Nov 04, 2009
Date Received: Oct 31, 2009
Date Sampled: Oct 30, 2009

Reported to: TURNERS AG CONSULTING CO
JOE TURNER
PO BOX 301
NEOLA IA 51559-

MORAN BEEF

DOMESTIC WATER ANALYSIS

Sample ID 3 Down Stream View QC

Lab Number 1644464

Level Exceeds EPA Limits	Problems Likely	Potential Problems	No Apparent Problems	Non-Detect

Analyte	SODIUM Na ppm	CALCIUM Ca ppm	MAGNESIUM Mg ppm	pH	NITRATE NITROGEN NO_3-N	SULFATE SO_4	CONDUCTIVITY mmhos/cm	TOTAL DISSOLVED SOILDS (TDS) ppm	HARDNESS gr/gallon	TOTAL COLIFORM MPN/100 mL	IRON Fe ppm	MANGANESE Mn ppm	CHLORIDE Cl ppm	COPPER Cu ppm	FLUORIDE F ppm
Level Found					8.7					>200					
Level Found					8.7					>200					
Caution Level					10					1					

Notes:
n.d. - Not Detected.